REMARKS

This application has been reviewed in light of the Office Action dated May 18, 2005. Claims 1-51 and 54-57 are presented for examination, of which Claims 1, 17-20, 36, and 54-57 are in independent form. Claims 1, 6, 17-20, 36, and 55-57 have been amended to define Applicant's invention more clearly. Favorable consideration is requested.

The Office Action states that Claims 1-51 and 54-57 are rejected under 35 U.S.C. § 103(a) as being unpatentable over European Patent Application No. 0 775 962 A2 (Yoda) in view of U.S. Patent No. 5,337,161 (Hube). Applicant submits that independent Claims 1, 17-20, 36, and 54-57, together with the claims dependent therefrom, are patentably distinct from the cited references for at least the following reasons.

One of the notable features of the present invention relates to combining or grouping a number of functional links within a document into an individual functional link that spans plural pages of the document. As described in the specification, this feature is intended to reduce the number of cutouts or tabs that form part of a traversable path between multiple pages in a printed version of the document.

The above generalized feature is found in each of the independent claims of this application as follows:

Claim 1: "(e) grouping a number of the functional links in the document for hard copy reproduction by arranging plural ones of the document links to at least an individual one of the functional links."

Claim 17: "means for grouping a number of the physical links in the linear document via arranging a plurality of the hyperlinks to at least an

individual one of the physical links spanning at least two of the pages."

Claim 18: "means for grouping a plurality of at least one of the physical links spanning at least two of the pages to correspond to a plurality of the hyperlinks."

Claim 19: "means for grouping a number of the physical links in the document corresponding to a plurality of the hyperlinks to at least an individual one of the physical links."

Claim 20: "grouping a number of the functional links in the document by arranging plural ones of the document links to at least an individual one of the functional links."

Claim 36: "fifth means for grouping a number of the functional links in the document for hard copy reproduction by arranging plural ones of the document links to at least an individual one of the functional links."

Claim 54: "a functional link with a part thereof corresponding to plural ones of the non-linear referential links."

Claim 55: "means for grouping a plurality of the tabs in a group so that a user can access directly one of the predetermined pages from page data including the plurality of referential links."

Claim 56: "means for grouping a plurality of the tabs in a group so that a user can access directly one of the predetermined pages from page data including the plurality of referential links."

Claim 57: "code for grouping a plurality of the tabs in a group so that a user can access directly one of the predetermined pages from page data including the plurality of referential links."

Each of the above-noted portions of the independent claims relates to the feature of the present invention that seeks to provide for an economy of the links spanning multiple pages whereby numerous links to one page merge into a single link (e.g., a tab or a cutout), which then provide a path to other one or more pages of the document. Thus, by virtue of the present invention, documents with significant numbers of links in multiple directions may be formed as is described in the specification.

In challenging the independent claims of this application and particularly Claim 1, the Office Action on page 3 states as follows:

> Yoda on col. 5, lines 33-38 and col. 10, line 32 - col. 11, line 4: teaches link information extracted from the received document as a base document can determine other documents that is linked to; generating page numbers on the base document and on each line document when printing. Also see Figure 2 shows information links of a document "Information 1" is assigned a page number and in Figure 10 shows the document "information 1" corresponding to page 10.

The various portions of Yoda mentioned in the Office Action are seen to describe or suggest any situation where multiple functional links are grouped together to provide a single functional link. In particular, Yoda at column 5, lines 33-48, states as follows:

A print unit 4 writes document information in a print buffer memory 7 in units of pages while inserting page numbers and the like upon printing the document information in the apparatus, and the stored information is output by the printer 18. An information reception unit receives document information designated by the user or the link information management unit 3 from an external document server via the network 8. A link information extraction unit 6 analyzes the received document information, extracts information associated with a link, and transfers the extracted information to the link information management unit 3. A page number management unit 10 generates a new page number on the basis of the page number of the previously printed document information upon printing document information, and transfers the page number data to the print unit 4.

The above quoted portion of Yoda is understood to merely state that a link is identified and used to create *a single and direct link* from one part of the information to another.

Further, Yoda at column 10, line 32, to column 11, line 4, states as follows:

For example, as shown in FIG. 8, when a plurality of pieces of document information are linked to form a research report as a whole, and when the user designates "information 0" which serves as both the cover and the table of contents of this research report as base document information and also sets "2" in the maximum hop count, nine pieces of document information, i.e., information 0, information 1, information 2, information 3, information 4, information 5, information 6, information 7, and information 8 are printed out. More specifically, the document information of the cover & table contents of the research report, and the contents of "Summary" to "Conclusion" are simultaneously printed, and also, "Previous Research Record" (information 7) and "Research Diary, January 15" (information 8) are also printed. However, "Research Diary, Contents of January" (information 9) which is linked to "Research Diary, January 15" (information 8) is not printed since the hop count exceeds 2. In this case, after information 8 is printed, the document information name of information 9 is printed as link destination list information.

The table of contents print processing in the information print apparatus of the print invention will be described below.

Immediately after the designated base document information and a series of document information to which the base document

> information is linked are printed, the print unit 20 reads out the contents of the information print history management table 21a shown in FIG. 10, and writes the readout contents in the print buffer memory as a list. The printer 18 prints the list on a paper sheet.

The above portions of Yoda are understood to describe that a single reference on one page may be used to create a link to information on another page. Particularly, in Fig. 8, Yoda shows multiple sources on one page (information 0, the contents page) each linking to information arrange on separate and respective pages of the document. Further, in Fig. 10, each individual piece of information refers to a corresponding and unique page number. There is no disclosure found in Yoda of multiple links proceeding to the same page. This for example, with respect to Fig. 8 of Yoda, would require the presently illustrated link from "summary" in information 0 to "summary" in information 1 and, for example, a further link (not shown in information 0) linking to "previous research" in information 1.

Further, because there are no multiple links between individual pages in Yoda, there is no suggestion or disclosure in Yoda of any need to merge or group together any such links so as to economize or optimize the manner in which linking is performed (e.g., using tabs or cutouts).

The Office Action also refers to Yoda at column 1, lines 1-6, which reads as follows:

> The present invention relates to an information print apparatus and method for printing information of a digital document such as a hypermedia document, or the like.

Further, there is also a reference to Yoda at column 1, lines 37-42, which reads as follows:

> More specifically, since paper documents are linearly managed by a sequence of page numbers, and hypermedia documents are nonlinearly managed by links among topics, printing a hypermedia document is a conversion from nonlinear information to linear information.

Neither of the two above-quoted portions of Yoda is understood to disclose anything that would teach or suggest the express limitation of claim 1 (and the other independent claims) that result in a grouping or merging of functional links within a document to thereby optimize links spanning multiple pages.

Importantly, in citing and relying upon Yoda, the Office Action fails to identify where Yoda either expressly discloses or clearly suggests "grouping plural ones of the document links to at least an individual one of the functional links," as stated in claim 1 and which forms a clear limitation to that claim.

The Office Action also relies upon Hube in combination with Yoda. In particular, the Office Action refers to Hube at column 2, lines 13-27, which states as follows:

> While the related art recognizes image shifting for creation of tabs within a print job, a flexible and improved system is needed that allows for the selective extraction of images from anywhere within a print job, document or a memory of stored images and then variably rotates, scales, and applies the images in accordance with a desired output position and orientation of a particular tab stock (sheet or media). A system is needed that further stores the selected tab images sequentially in memory, therefore enabling the user to insert and delete tab images easily. Finally, the pages requiring tab stock in a print job are automatically printed in their proper order within the print job with their tab image on the tab (or tab extension).

Hube also is relied upon at Fig. 17, with reference to reference numerals 219 to 223 and 226. This is described at column 8, lines 47-63, which states as follows:

> In accordance with the invention as shown in FIG. 17, the user can select and extract any tab image (214-218) for printing on a designated tab extension (219-223). As shown, again in FIG. 17, a tab image from any page (226) or a combination of pages in the print job can be selected and positioned for printing on any particularly designated tab extension in a series of tab extensions. To do so, the tab extraction parameters (S5) must be determined. As expanded from step S5 in FIG. 9, FIG. 11 shows the steps for determining the parameters for the extraction of a tab image (S35). The user selects the tab image input orientation from a menu (S36). The orientation is based on the position of a tab image in relation to coordinate x-y axes. With respect to the coordinate axes as defined by the system, the input and output directions of the tab image preferably include 0°, 90°, 180°, or 270°.

Significantly, Figure 17 of Hube shows a table of contents page including a number of referential links. As clearly illustrated, each of those referential links forms a path to a unique page of the document, that page having a tab corresponding to the link. Nothing in Hube is seen to disclose or suggest multiple links to a single one of the document pages. Further, since the arrangement described in Hube does not need any optimization of links spanning multiple pages, Hube offers no motivation to include the specific feature of the present invention discussed above.

It follows therefore that the combination of Hube and Yoda relied upon in the Office Action does not teach or even suggest the specifically claimed feature referred to above and recited in claim 1 of "grouping a number of the functional links in the document for hard copy reproduction by arranging plural ones of the document links to at least an individual one of the functional links."

The prior art of Hube is directed towards placing a tab on a page, where the tab has text or an image selected from the page, and where the selection is done by a user. It is respectfully submitted that a combination of Yoda and Hube, assuming such combination would even be permissible, would result in the following operation:

- From Yoda, a link is identified and altered to a page number if the reference is a part of the printed set; and
- From Hube, a user then identifies the link and a tab is generated for the relevant page. The user is required to assign the tab to the correct page as Hube does not provide a means to link between the page reference and the actual page that the tab is applied to (see col. 7, lines 10-12). In addition, once a tab is placed on the correct page by the user, the user has to specify what is applied on the tab (see col. 9, lines 33 to 34).

A broad aspect of the present invention relates to grouping plural links into a single link. This encompasses performing such optimization upon a single page of a hard copy document (e.g., claim 2). For the sake of advancing the prosecution of this application, Applicant acknowledges that most (but not all) utility arises where the optimized link spans multiple pages of the hard copy document. As a consequence some of the independent claims have been amended to refer to the merged link being part of a path between at least two pages of

the hardcopy document. This is clearly shown, for example, in Figs. 8A, 8B and 10B of this application. This feature has been claimed in claim 3 and has been searched and examined. The rejection of claim 3 on page 5 of the Office Action focuses on the tab or cutout and ignores the significance of the multiple pages and their relevance to a grouped/merged/optimized functional link. Whilst Hube discloses tabs, there is no disclosure of any one tab being a destination for more than one link, let alone a merger/grouping/optimization of plural links. This feature has also been claimed in claim 54.

Accordingly, Applicant submits that independent claims 17-20, 36, and 54-57 of this application are patentable over the cited references, and respectfully requests withdrawal of the rejection under 35 U.S.C. § 103(a). The other rejected claims in this application depend from one or another of the independent claims discussed above and therefore are submitted to be patentable for at least the same reasons. However, because each dependent claim is also deemed to define an additional aspect of the invention, individual consideration of the patentability of each claim on its own merits is respectfully requested.

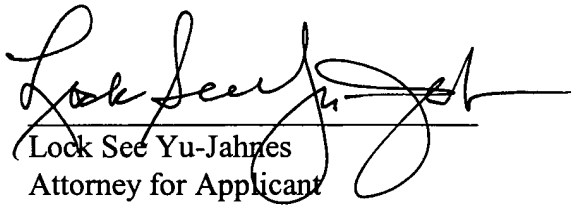
In view of the foregoing amendments and remarks, an early and favorable examination is respectfully requested.

No petition to extend the time for response to the Office Action is deemed necessary for the present Preliminary Amendment. If, however, such a petition is required to make this Amendment timely filed, then this paper should be considered such a petition and the Commissioner is authorized to charge the requisite petition fee to Deposit Account 06-1205.

CONCLUSION

Applicant's undersigned attorney may be reached in our New York Office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address listed below.

Respectfully submitted,



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